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EXAMINER	
ZIMMERMANN, JOHN P	
ART UNIT	PAPER NUMBER
2861	
MAIL DATE	DELIVERY MODE
02/15/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/527,407	GOODYER, ANTHONY WILLIAM	
	Examiner	Art Unit	
	JOHN P. ZIMMERMANN	2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The amendment filed 10 December 2007 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "digital or planographic printing type and not to the ink jet type of printing processes" [Amendments to the Specification, Page 2, Lines 6-7]. Applicant attempts to amend the specification to be more inclusive of additional printing methods, while at the same time attempting to limit the types of printing method to a tight interpretation of printing methods well known in the art at the time of the invention all with no reference to originally submitted documentation.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. **Claims 9-14** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed

invention. The term "planographic" [New Claim 9, Page 3, Lines 8, 10, & 13 and New Claim 13, Page 4, Lines 18 & 20] is argued by the applicant to be a specifying term not previously disclosed.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Toganoh et al.,** (GB 2142579 A) in view of **Sharma et al.,** (US 5,980,998 A).

a. Toganoh et al. teach an apparatus for printing including: a printing station (Toganoh et al. – Figure 1, Reference #4, shown below) for forming a printed substrate from a substrate; a conveyor (Toganoh et al. – Figure 1, Reference #3 & #5, shown below) for transporting the substrate (Toganoh et al. – Figure 1, Reference #11, shown below and Description, Page 2, Line 25) to the printing station; a UV ink curing station

(Toganoh et al. – Figure 1, Reference #9, shown below; Abstract, and Description, Page 2, Lines 20-21); and a moving part arranged to move the printed substrate to a position before the UV ink curing station (Toganoh et al. – Figure 1, Reference #7, shown, below).

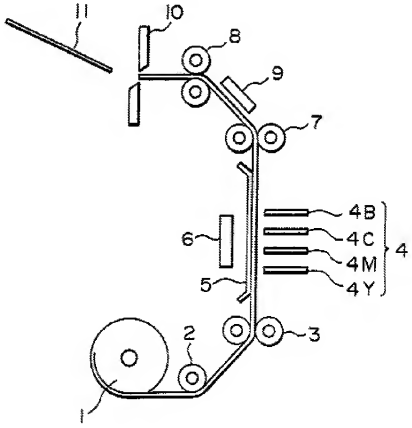


FIG. 1

b. Continuing, Toganoh et al. teach a transfer part arranged to transfer the substrate from the position before the UV ink curing station to the UV ink curing station (Toganoh et al. – Figure 1, Reference #7 & #8, shown above), a UV irradiating part sufficient for curing ink at the UV ink curing station (Toganoh et al. – Abstract and Figure 1, Reference #9, shown above), and a removing part arranged to remove the substrate from the curing station (Toganoh et al. – Figure 1, Reference #8, shown above). Toganoh et al. ***do not*** specifically teach the printing station is a planographic printing station. ***However,*** Sharma et al. clearly teach that in the art of printing apparatuses used for depositing a coating onto a substrate, a printing station could use any of the following methods or types: ink jet cartridge type dispensers, thread dispensers, and sprayers, stamping, roller printing, letter press printing, gravure printing, screen printing, flexographic printing, planographic printing, offset printing, mimeo graphic printing, and the like (Sharma et al. – Detailed Description, Column 4, Line 22 – Column 5, Line 4). Given the same field of endeavor, specifically a printing apparatus for forming a printed substrate from a substrate, it is apparent that one of ordinary skill in the art at the time the invention was made would have been motivated to combine the printing apparatus with an ink-jet type printing station as taught by Toganoh et al. with the printing apparatus with a ink-jet type or planographic type printing station as taught by Sharma et al., if for no other reason than to provide a more robust option for the precise depositing of a substance onto a substrate (Sharma et al. – Background, Column 3, Lines 40-44).

7. **Claims 10 & 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Toganoh et al.,** (GB 2142579 A) and **Sharma et al.,** (US 5,980,998 A) as applied to **claim 9**

above, and further in view of **Nakanishi et al.,** (US 2002/0063769 A1) and **Ebata,** (US 5,485,189 A).

a. As related to dependent **claim 10,** the combination of Toganoh et al. and Sharma et al. teach the limitations of **claim 9** for the reasons above, Additionally, Toganoh et al. teach a vacuum bed arranged with respect to the conveyor to receive the substrate into a desired curing position upon the substrate being released from the conveyor (Toganoh et al. – Figure 1, Reference #5 & #6, shown below and Description, Page 1, Lines 43-45). Toganoh et al. ***do not*** specifically teach that the UV ink curing station has a separate vacuum bed. ***However,*** both Nakanishi et al. and Ebata teach a curing station having a separate bed (Nakanishi et al. – Figure 6, Reference #20 and Arrow, shown below) with means of applying tension to the recording medium to position it on the bed in the curing station (Ebata – Figure 3, Reference #20 & #21 and Summary, Column 3, Lines 40-41, 55-56 & 61-62).

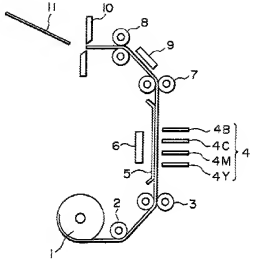

11
10
8
9
7
4B
4C
4M
4Y
4
6
5
2
3
1

FIG. 1

FIG. 6

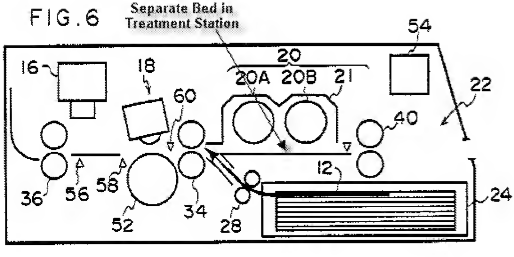
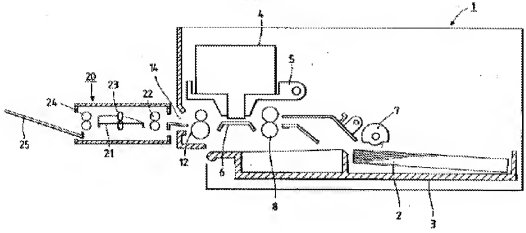

Separate Bed in Treatment Station
54
20
16
18
20A
20B
21
22
60
40
12
36
56
58
34
24
52
28

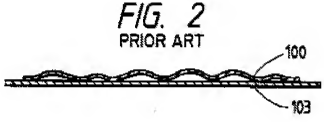
FIG. 3



b. As related to further dependent **claim 11,** the previous combination of Toganoh et al., Sharma et al., Nakanishi et al., and Ebata remains as applied to **claim 10**, additionally, the combination clearly teaches nip rollers positioned at an exit of the curing station (Toganoh et al. – Figure 1, Reference #8, shown above, Nakanishi et al. – Figure 6, Reference #40, shown above, and Ebata – Figure #3, Reference #24, shown above), the nip rollers configured to serve to release the substrate from the conveyor and to draw the substrate into the desired curing position.

Given the same field of endeavor, specifically an ink curing apparatus associated with an ink-jet recording apparatus, it is apparent that one of ordinary skill in the art at the time the invention was made would have been motivated to combine the UV curing apparatus and apparatus for ink-jet recording with a vacuum bed for holding the recording medium as taught by the combination of Toganoh et al. and Sharma et al. with the specific fixing apparatus with recording medium holding bed, separately detachable from the printing device as taught by Nakanishi et al. and the specific fixing apparatus with separate recording medium holding bed as taught by Ebata, in an effort to provide an image recording apparatus with separate stations in a compact design with a simple structure

(Nakanishi et al. – Summary Paragraph 8) while preventing the wave phenomenon of the recording media (Ebata – Figure 2, shown below and Summary, Column 3, Lines 40-41).



8. **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Toganoh et al.,** (GB 2142579 A) **Sharma et al.,** (US 5,980,998 A) **Nakanishi et al.,** (US 2002/0063769 A1) and **Ebata,** (US 5,485,189 A) as applied to **claims 9-11** above, and further in view of **Ylitalo et al.,** (US 6,543,890 B1) and **Bar et al.,** (US 2003/0020795 A1).

The combination of Toganoh et al., Sharma et al., Nakanishi et al., and Ebata teach the limitations of **claim 11** for the reasons above, Additionally, applicant yields that it is typical in the art to include suitable sensors and circuits to monitor the UV fixing station for elevated temperature situations and thereby prevent overheating of the conveyance means (Present Application – Background Art, Page 2, Lines 14-17). Meanwhile, Ylitalo et al. teach an apparatus for curing of ink used in inkjet printing which includes a means of activating and deactivating [i.e. precisely controlling the amount of radiation that reaches the medium) the UV lamps to prevent overheating (Ylitalo et al. – Title; Abstract; and Summary, Column 3, Lines 14-20). Finally, Bar et al. teach a device for curing ink-jet prints with one or more thermosensors [i.e. temperature sensor] used to

control the UV lamp [i.e. radiation device] (Bar et al. – Title and Description, Paragraphs 25 & 27). Given the same field of endeavor, specifically an ink curing apparatus associated with an ink-jet recording apparatus, it is apparent that one of ordinary skill in the art at the time the invention was made would have been motivated to combine the UV curing apparatus and apparatus for ink-jet recording as taught by the combination listed above with the specific use of temperature sensors and other controlling means as taught by Ylitalo et al. and Bar et al., in an effort to provide means of control (Bar et al. – Description, Paragraph 27), prevention of overheating (Ylitalo et al. – Summary, Column 3, Lines 19-20), and to provide the typical sensor and circuits needed to prevent damage to the medium in a way that does not add to the capital cost or adversely affect the compact design of UV lamps used in inkjet devices (Ylitalo et al. – Background, Column 2, Lines 46-51).

9. **Claim 13** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Toganoh et al.,** (GB 2142579 A) and **Sharma et al.,** (US 5,980,998 A) and further in view of **Nakanishi et al.,** (US 2002/0063769 A1) and **Ebata,** (US 5,485,189 A).

a. As related to independent **claim 13,** Toganoh et al. teach an apparatus for printing including: a printing treatment station (Toganoh et al. – Figure 1, Reference #9, shown below) for forming a printed substrate; rollers, one of the rollers located at an entrance to the treatment station (Toganoh et al. – Figure 1, Reference #3 & #7, shown below); a first vacuum bed located below the conveyor and between the rollers (Toganoh et al. – Figure 1, Reference #6, shown below); and nip rollers located at a second side of the treatment

station (Toganoh et al. – Figure 1, Reference #8, shown below), the nip rollers configured to draw a paper substrate from the conveyor and over the second vacuum bed [i.e. through the treatment station].

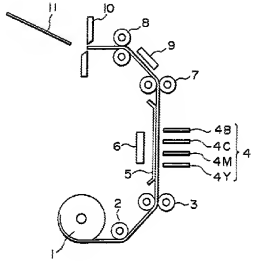
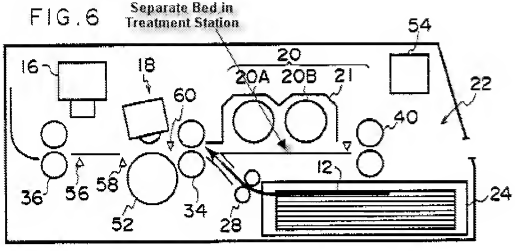


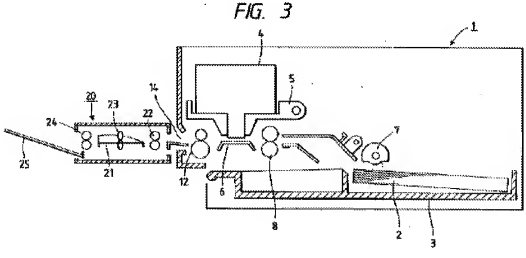
FIG. 1

b. Continuing with **claim 13,** Toganoh et al. ***do not*** specifically teach the printing station is a planographic printing station. ***However,*** Sharma et al. clearly teach that in the art of printing apparatuses used for depositing a coating onto a substrate, a printing station could use any of the following methods or types: ink jet cartridge type dispensers, thread dispensers, and sprayers, stamping, roller printing, letter press printing, gravure printing, screen printing, flexographic printing, planographic printing, offset printing, mimeo graphic printing, and the like (Sharma et al. – Detailed Description, Column 4, Line 22 – Column 5, Line 4). Given the same field of endeavor, specifically a printing apparatus for forming a printed substrate from a substrate, it is apparent that one of

ordinary skill in the art at the time the invention was made would have been motivated to combine the printing apparatus with an ink-jet type printing station as taught by Toganoh et al. with the printing apparatus with a ink-jet type or planographic type printing station as taught by Sharma et al., if for no other reason than to provide a more robust option for the precise depositing of a substance onto a substrate (Sharma et al. – Background, Column 3, Lines 40-44).

c. Continuing with **claim 13,** while Toganoh et al. teach a UV lamp (Toganoh et al. Figure 1, Reference #9, shown above; Abstract, and Description, Page 2, Lines 20-21), Toganoh et al. ***do not*** specifically teach a box located over the treatment station, or a second vacuum bed located under the lamp. ***However,*** both Nakanishi et al. and Ebata teach a curing station having a separate bed (Nakanishi et al. – Figure 6, Reference #20 and Arrow, shown below) with means of applying a vacuum [i.e. tension] by the second vacuum bed to located the drawn paper substrate in position in the treatment station for UV treatment by the lamp in forming the printed substrate from the drawn paper substrate (Ebata – Figure 3, Reference #20 & #21 and Summary, Column 3, Lines 40-41, 55-56 & 61-62). Additionally, Nakanishi et al. clearly teach a lamp positioned in a box located over the treatment station (Nakanishi et al. – Figure 6, Reference #20, #20A, #20B, #21 and Arrow, shown below).





d. Continuing with **claim 13,** Toganoh et al. teach the UV ink is transferred to a surface of the drawn paper substrate and irradiated by the lamp (Toganoh et al. Figure 1, Reference #9, shown above; Abstract, and Description, Page 2, Lines 20-21). Toganoh et al. ***do not*** specifically teach a conveyor is running ***on*** the rollers or the specific composition of the UV ink. ***However,*** applicant yields that it is typical in the art that inks used in the art generally comprise a matrix of a monomer which is polymerisable as a result of activation of a photo initiator by a predetermined UV frequency and added

pigments (Present Application – Background Art, Page 1, Lines 9-15). Additionally, one of ordinary skill in the art at the time of the invention would have clearly understood that for the conveyance of a substrate through a variety of stations or areas, a significant number of means could be incorporated, noticeably a conveyor that runs on rollers. This type of apparatus would be considered commonplace in a unit where sheets of substrate are to be moved through the stations. Given the teaching of Toganoh et al. that the substrate [i.e. recording member] could be a sheet in place of that in form of a roll, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a conveyor that ran on the rollers.

Given the same field of endeavor, specifically an ink curing apparatus associated with an ink-jet recording apparatus, it is apparent that one of ordinary skill in the art at the time the invention was made would have been motivated to combine the UV curing apparatus and apparatus for ink-jet recording with a vacuum bed for holding the recording medium as taught by Toganoh et al. and Sharma et al. with the specific fixing apparatus with recording medium holding bed, separately detachable from the printing device as taught by Nakanishi et al. and the specific fixing apparatus with separate recording medium holding bed as taught by Ebata, in an effort to provide an image recording apparatus with separate stations in a compact design with a simple structure (Nakanishi et al. – Summary Paragraph 8) while preventing the wave phenomenon of the recording media (Ebata – Figure 2, shown below and Summary, Column 3, Lines 40-41).

FIG. 2
PRIOR ART

10. **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Toganoh et al.,** (GB 2142579 A) **Sharma et al.,** (US 5,980,998 A) **Nakanishi et al.,** (US 2002/0063769 A1) and **Ebata,** (US 5,485,189 A) as applied to **claim 13** above and further in view of **Codos** (US 6,755,518 B2).

The combination of Toganoh et al., Sharma et al., Nakanishi et al., and Ebata teach the limitations of **claim 13** for the reasons above, additionally, the combination clearly teaches the conveyance means is adapted to receive a vacuum from the first vacuum bed under the conveyor (Toganoh et al. – Figure 1, Reference #5 & #6, shown below). The combination ***does not*** specifically teach the conveyor is an endless conveyor. ***However,*** one of ordinary skill in the art at the time of the invention would have clearly understood that for the conveyance of a substrate through a variety of stations or areas, a significant number of means could be incorporated, noticeably a conveyor that runs on rollers and particularly an endless conveyor. Codos clearly demonstrates a substrate convey by a endless conveyor belt, and even a vacuum bed type conveyor wherein one of the rollers is hollow, is perforated, and is adapted to receive a vacuum from The first vacuum bed under the conveyor to break the vacuum and release the drawn paper after the one roller

has been rotated through more than 90 degrees (Codos – Detailed Description, Column 4, Line 57 – Column 5, Line 65 and Figure 1, Reference #105, #120, #121, shown below).

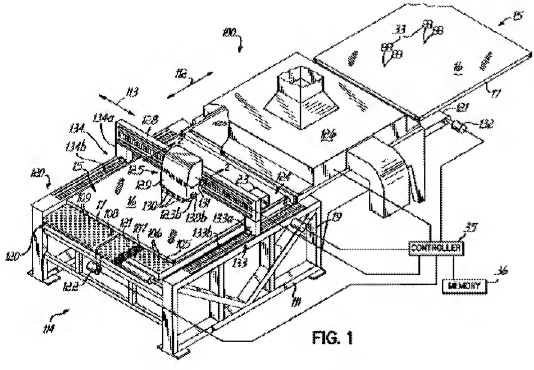


FIG. 1

Given the same field of endeavor, specifically an printing apparatus with a substrate conveyance system and a UV treatment station, it is apparent that one of ordinary skill in the art at the time the invention was made would have been motivated to combine the apparatus for planographic printing with a conveyance system and UV treatment station as taught by the combination of Toganoh et al., Sharma et al., Nakanishi et al., and Ebata with the printing apparatus with a UV treatment station for the applied ink and the detailed endless belt conveyance system as taught by Codos, in an effort to provide evidence of the variety of acceptable substrate conveyance means that were well known in the art at the time of the invention as well as provide a means for printing with UV

curable inks onto a substrate that tends to deform when heated (Codos – Summary, Column 1, lines 63-67).

Response to Arguments

11. Applicant's arguments with respect to **claims 1-8** have been considered but are moot in view of the cancellation of **claims 1-8**.

12. Applicant's preliminary arguments with respect to **claims 9-14** have been considered but are moot in view of the new ground(s) of rejection.

13. With respect to newly presented **claim 9,** and therefore **claims 10-12,** which inherently contain all of the limitations of independent **claim 9,** applicant appears to have merely rewritten the original **claim 1,** incorporating the limiting term "planographic." Due to these amendment(s) and addition of new claimed matter, a further search was necessitated thereby producing additional prior art and more specific notation of existing prior art of record. Applicant argues that "These references (FAOM), do not teach or suggest a planographic printing station for forming a printed substrate from a substrate, in combination with the remaining recited elements…"In response to the applicant's arguments, the additional prior art clearly indicates that which was well known in the art at the time of the invention, specifically teaching that in the case of image forming apparatuses for forming a printed substrate from a substrate, the printing station can include a variety of types, not the least of which are ink-jet types and planographic types. While the applicant has suggested in the argument that the previously relied upon prior art of record did not fairly suggest the above mentioned items, given the fact that the additional prior art clearly teaches that which was well known in the art at the time of the invention, the non-

patentability over the existing prior art is emphasized. As no further arguments were made, all dependent claims have been rejected accordingly.

14. With respect to newly presented **claim 13,** and therefore **claim 14,** which inherently contains all of the limitations of independent **claim 13,** applicant appears, by virtue of the statement "Claims 13-14 are also believed patentable for the reasons outlined above," which references the arguments for **claims 9-12,** to have merely rewritten some of the original **claims,** making an independent claim out of multiple dependent claims while incorporating the limiting term "planographic." Due to these amendment(s) and addition of new claimed matter, a further search was necessitated thereby producing additional prior art and more specific notation of existing prior art of record. Applicant's arguments have therefore been addressed above and as no further arguments were made, all dependent claims have been rejected accordingly.

Conclusion

15. The additional prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sharma et al. (US 6,548,122 B1) teach depositing solution onto a substrate using ink jet or planographic printing method. Blaessing et al. (US 2003/0098946 A1) teach production of printed substrates by ink jet printing as well as a large number of printing processes including planographic printing. Korem (US 6,648,470 B2) teaches an apparatus and method for printing which could include direct or indirect printing.

16. ***Examiner's Note:*** Examiner has cited particular Figures & Reference Numbers, Columns, Paragraphs and Line Numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings

of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN P. ZIMMERMANN whose telephone number is (571)270-3049. The examiner can normally be reached on Monday - Thursday, 7:00am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Luu can be reached on 571-272-7663. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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